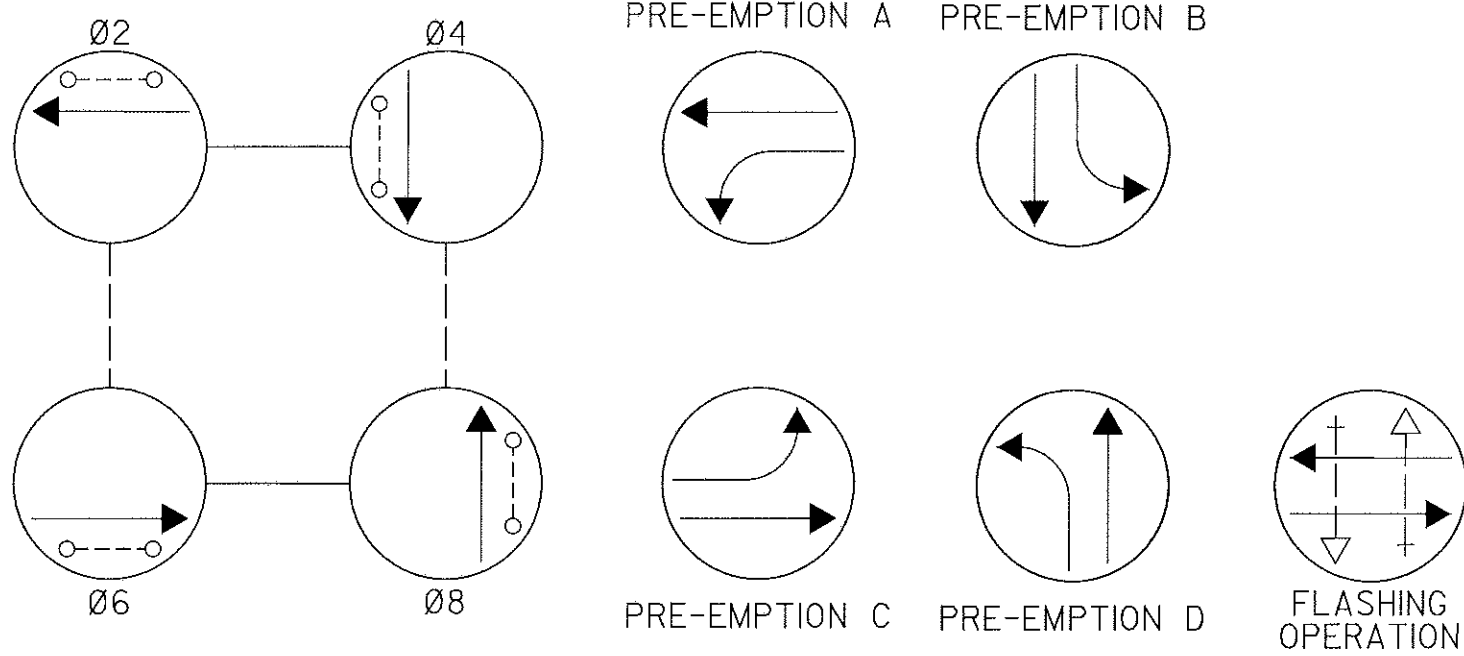


PHASING DIAGRAM																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 2 & 6	G	G	G	G	R	R	R	R	W	W	W	W	DW	DW	DW	DW
2 & 6 PED. CLEAR	G	G	G	G	R	R	R	R	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	G	G	G	G	DW	DW	DW	DW	W	W	W	W
4 & 8 PED. CLEAR	R	R	R	R	G	G	G	G	DW	DW	DW	DW	FL DW	FL DW	FL DW	FL DW
4 & 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPTION A	R	R		G	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
A CHANGE	R	R	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPTION B	R	R	R	R		G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
B CHANGE	R	R	R	R	Y	Y	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPTION C		G	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
C CHANGE	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PRE-EMPTION D	R	R	R	R	R	R		G	DW	DW	DW	DW	DW	DW	DW	DW
D CHANGE	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

U.S. 11 (SOUTH BURHANS BOULEVARD) IS ASSUMED TO RUN IN AN NORTH-SOUTH DIRECTION.

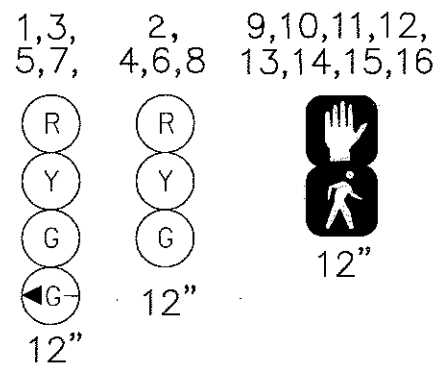
NEMA PHASING



PHASING NOTES:

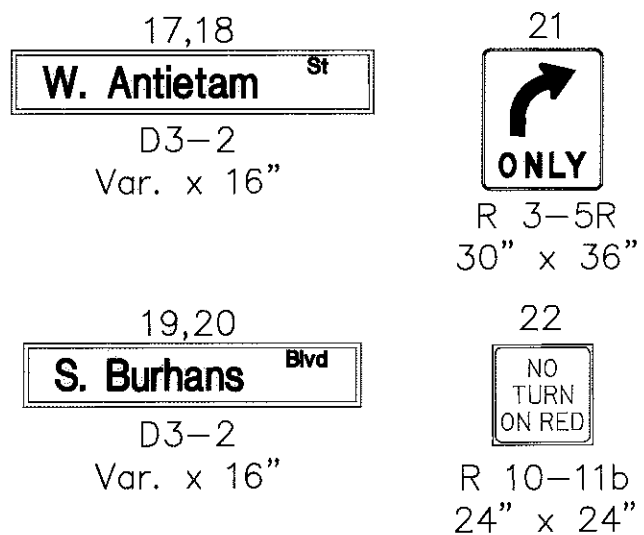
- PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY
- PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY

SIGNALS



→ OPTICAL PRE-EMPTION DETECTOR EYE

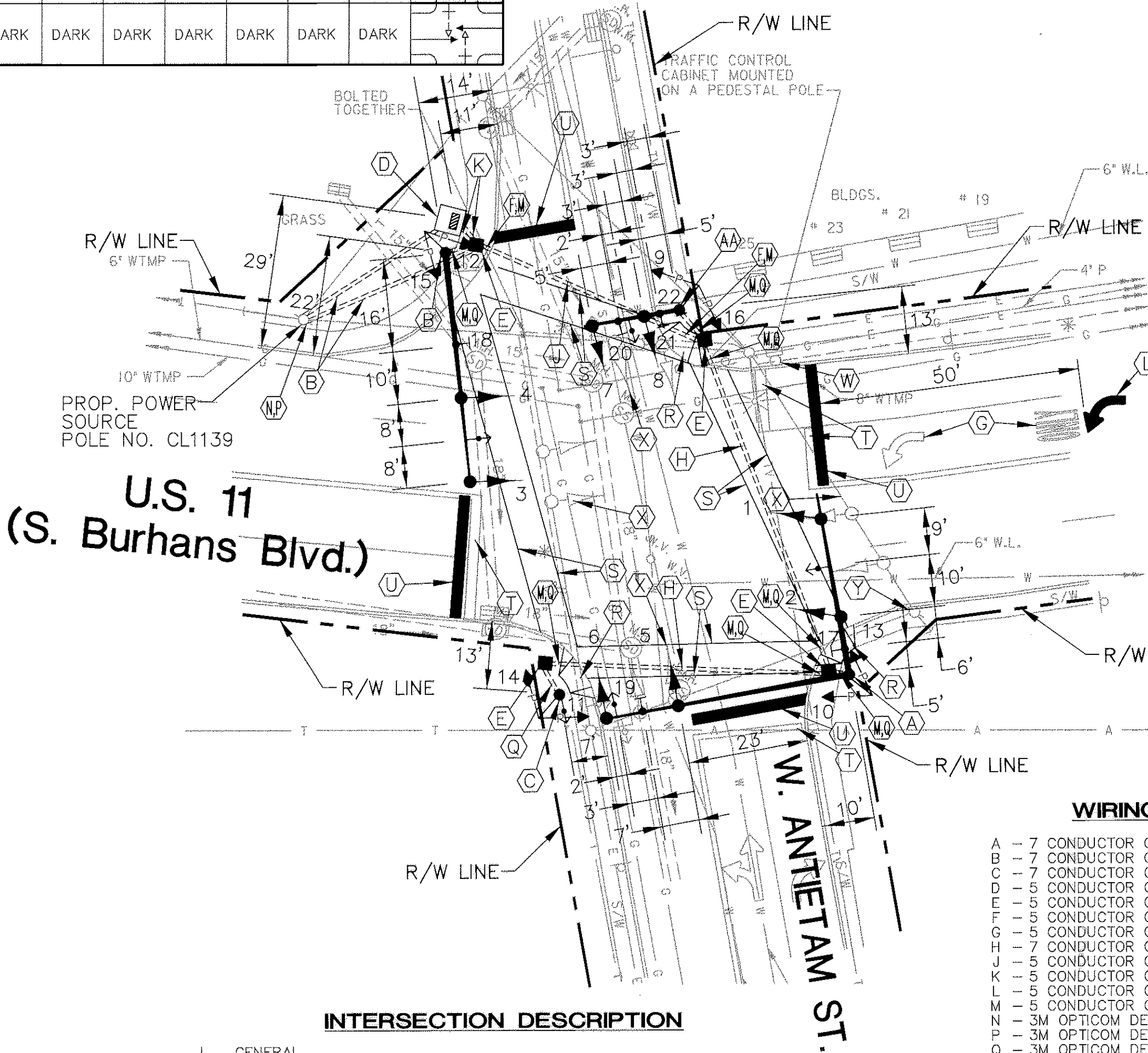
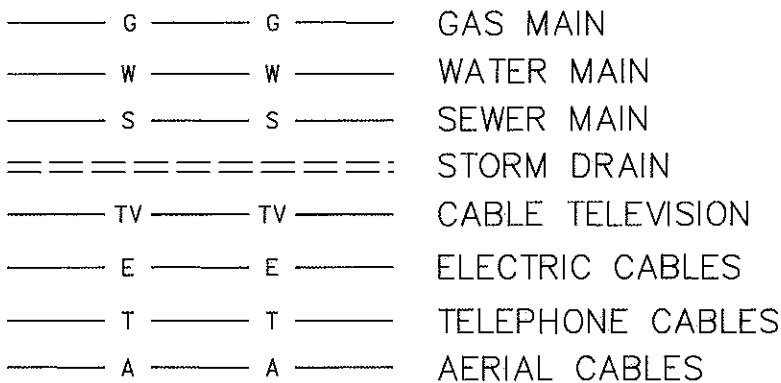
SIGNS



CONSTRUCTION DETAILS

- (AA) INSTALL 21" STEEL POLE, 18" MAST ARM, SIGNAL HEADS, SIGNS, OPTICOM DETECTOR, AND PEDESTRIAN SIGNALS (NOTE: 1-2", 90-DEGREE P.V.C. BEND)
- (A) INSTALL 21" STEEL POLE, 30" AND 48" MAST ARMS, SIGNAL HEADS, SIGNS, OPTICOM DETECTORS, AND PEDESTRIAN SIGNALS (NOTE: 1-2", 90-DEGREE P.V.C. BEND).
- (B) INSTALL 21" STEEL POLE, 44" MAST ARM, SIGNAL HEADS, SIGNS, OPTICOM DETECTOR, AND PEDESTRIAN SIGNALS (NOTE: 1-2", 90-DEGREE P.V.C. BEND).
- (C) INSTALL 10" STEEL PEDESTAL POLE, PEDESTRIAN SIGNALS, AND OPTICOM DETECTOR (NOTE: 1-2", 90-DEGREE P.V.C. BENDS).
- (D) INSTALL BASE-MOUNTED CABINET, SIZE #5, AND CONTROLLER WITH ALL NECESSARY EQUIPMENT AS SHOWN (NOTE: 2-4", 90-DEGREE P.V.C. BENDS; AND, 2-2", 90-DEGREE P.V.C. BENDS.)
- (E) INSTALL HANDHOLE.
- (F) INSTALL 3" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- (G) REMOVE EXISTING PAVEMENT MARKINGS
- (H) INSTALL 2" P.V.C.(SCHEDULE 80) ELECTRICAL CONDUIT (SLOTTED).
- (J) INSTALL 3" P.V.C. (SCHEDULE 80 ELECTRICAL CONDUIT (SLOTTED).
- (K) INSTALL 4" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- (L) INSTALL PAVEMENT MARKING (ARROW)
- (M) REMOVE AND REPLACE EXISTING SIDEWALK.
- (N) INSTALL 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT - RISER AND 2" WEATHERHEAD
- (P) INSTALL 10' OF 2" P.V.C. (SCHEDULE 80) ELECTRICAL CONDUIT - RISER AND COIL 25' OF ADDITIONAL CABLE.
- (Q) INSTALL 2" P.V.C. (SCHEDULE 40) ELECTRICAL CONDUIT (TRENCHED).
- (R) CONSTRUCT SIDEWALK RAMP
- (S) INSTALL 12" SOLID WHITE LINE FOR CROSSWALKS..
- (T) REMOVE EXISTING STOP BAR.
- (U) INSTALL 24" SOLID WHITE LINE.
- (W) REMOVE EXISTING CONTROLLER, CABINET, PEDESTAL POLE AND FOUNDATION.
- (X) REMOVE EXISTING SPAN WIRE, SIGNALS, SIGNS, AND OPTICOM DETECTOR.
- (Y) REMOVE EXISTING WOODEN POLE.

UTILITY LEGEND



INTERSECTION DESCRIPTION

I. GENERAL

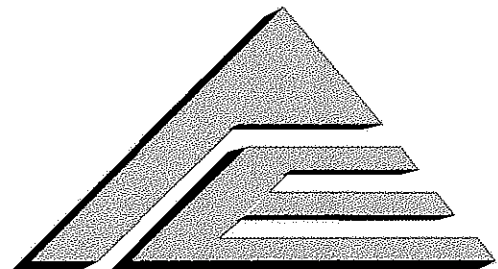
THIS INTERSECTION IS U.S. 11 (SOUTH BURHANS BOULEVARD) AND WEST ANTIETAM STREET. CONSTRUCTION AT THIS INTERSECTION INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AND INTERCONNECTION WITH THE OTHER SIGNALIZED INTERSECTIONS IN THE NEW CITY-WIDE SYSTEM. IT IS ASSUMED THAT U.S. 11 (SOUTH BURHANS BOULEVARD) RUNS IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR (4) PHASE PRE-TIMED MODE. THE U.S. 11 (SOUTH BURHANS BOULEVARD) APPROACHES WILL OPERATE CONCURRENTLY. THE WEST ANTIETAM STREET APPROACHES WILL OPERATE CONCURRENTLY. PEDESTRIAN SIGNALS WILL OPERATE CONCURRENTLY WITH THE U.S. 11 (SOUTH BURHANS BOULEVARD) PHASE AND THE WEST ANTIETAM STREET PHASE.

PRE-EMPTION ON WESTBOUND U.S. 11 (SOUTH BURHANS BLVD.) WILL CALL PRE-EMPTION A. PRE-EMPTION ON SOUTHBOUND WEST ANTIETAM ST. WILL CALL PRE-EMPTION B. PRE-EMPTION ON EASTBOUND U.S.11 (SOUTH BURHANS BLVD.) WILL CALL PRE-EMPTION C. PRE-EMPTION ON NORTHBOUND ANTIETAM ST. WILL CALL PRE-EMPTION D.

A NEW EIGHT PHASE FULLY ACTUATED CONTROLLER WITH TELEMTRY MODULE AND PRE-EMPTION HOUSED IN A GROUND MOUNTED CABINET WILL BE INSTALLED.



A/E GROUP, INC.
ENGINEERS • PLANNERS
181 E. Main Street
Westminster, Maryland 21158
A/E Job No. 95-289

EQUIPMENT LISTS

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
1	EA	SP	BASE MOUNTED LOCAL CABINET (SIZE 5) LESS DETECTION EQUIPMENT WITH 8 PHASE ASC II CONTROLLER WITH TELEMTRY AND OPTICOM PRE-EMPTION MODULE
55	SF	813	FLAT SHEET ALUMINUM SIGNS CONSISTING OF: - 1 EACH R3-5R (30" X 36")-MAST ARM MOUNT - 1 EACH R10-11b (24" X 24")-MAST ARM MOUNT - 2 EACH D3-2 (S. Burhans Blvd) (VAR." X 16")-MAST ARM MOUNT - 2 EACH D3-2 (W. Antietam St) (VAR." X 16")-MAST ARM MOUNT

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNIT	SPECIFICATION SECTION	DESCRIPTION
5	CY	205	TEST PIT EXCAVATION
10	CY	206	REMOVAL OF EXISTING SIDEWALK
450	LF	SP 555	12 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
90	LF	SP 555	24 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
1	EA	SP 555	PERMANENT PREFORMED PAVEMENT MARKING ARROW

WIRING DIAGRAM

WIRING LEGEND

- A - 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
B - 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
C - 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
D - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
E - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
F - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
G - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
H - 7 CONDUCTOR CABLE (NO. 14 A.W.G.)
J - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
K - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
L - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
M - 5 CONDUCTOR CABLE (NO. 14 A.W.G.)
N - 3M OPTICOM DETECTOR CABLE, MODEL 138
P - 3M OPTICOM DETECTOR CABLE, MODEL 138
Q - 3M OPTICOM DETECTOR CABLE, MODEL 138
R - 3M OPTICOM DETECTOR CABLE, MODEL 138
S - 3M OPTICOM DETECTOR CABLE, MODEL 138
T - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
U - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
V - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
W - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
X - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
Y - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
Z - 1 CONDUCTOR CABLE (NO. 4 A.W.G.)
X - 3/4"x10' GROUND ROD
PS - PROPOSED ELECTRICAL SERVICE
I/C - I/C INTERCONNECT CABLE

NOTE: EXISTING RIGHT-OF-WAY BASED ON AS-BUILT PLANS FOR NORTH-SOUTH BOULEVARD DATED 4-6-68, CITY OF HAGERSTOWN DRAWING NO. 12-126-02 AND OTHER INFORMATION PROVIDED BY THE CITY OF HAGERSTOWN.

MDOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

LOG ML 21001107.21

DRAWN BY: T. COURVILLE

DES. BY: J. LAWRENCE

CHK. BY:

**US 11 (South Burhans Boulevard)
at West Antietam St.**

COUNTY: WASHINGTON

DATE: 05/30/97

F.A.P. NO.

STPG-218-1(7)E

TS

NO.

SHEET NO.

SCALE: 1" = 20'

S.H.A. NO.

WA9535185

3698

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